

Cultural Values and Interpersonal Similarity Influencing September 11 Emotions and Crisis Information Diffusion

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Abstract.

A survey of 76 respondents ages 17-20 profiled cultural crisis information sources regarding the attack of September 11 and analyzed emotions then and one year later. The research supports the significance of interpersonal sources compared with mediated sources concerning first knowledge of crisis information. Interpersonal, immediacy needs during crisis information may account for the persistence of this effect. Significant affective shifts over one year suggest that culture qualitatively shapes which emotions persist over time. Positive emotions (like empathy-sorrow, hope, or safety for oneself) are culturally appropriate. By contrast, U.S.-culture discourages nurturing negative emotions like fear, shock, confusion, uncertainty, anger, horror, or revenge. Cultural norms influence post-crisis communication in ways to reduce the anxiety of such an attack and consequently to organize and reframe a positive set of feelings in light of cultural norms and values.

Key words: cultural crisis, crisis communication, interpersonal networking, diffusion, communication and emotions, culture, social reframing, media theory, media usage, appraisal theory, communication discourse.

Introduction

Crisis-oriented information and diffusion research are communication topics of great interest. The many media usage and interpersonal factors typically identified in those studies often attempt to discover factors which best

predict the information process for targeted receivers. If the source is interpersonal, identifying factors such as immediacy relationships, interpersonal networks, and personality intervention is significant. If the source is mass mediated, identifying media usage theories and their impact is important. However, most information studies of crisis-oriented diffusion do not report the emotional/affective impact of the information or the cultural dimension of the information process.

Rather, such research focuses on message sources, structures, and systems or on the behavioral outcomes related to the message. To examine crisis-news, diffusion, and interpersonal network research from an affective and a cultural response viewpoint offers a unique look at news diffusion. Crisis information in a cultural context summons a wide array of experiences. This article focuses on one of those experiences: the emergence of emotions and their shift over a one-year period in a U.S. cultural context --- the September 11 attack.

Crisis news diffusion, like September 11, 2001 regarding the attacks on the New York Trade Center Towers and the Pentagon, though tragic in content, provides an opportunity to analyze how crisis information is learned and how it affects a culture. In particular, this study surveyed respondents regarding their source and location of news information concerning September 11, 2001, and measured their affective influence that day and one year later. By learning how people process information and consequently how they respond to such information, intercultural communication scholars are in a better position to understand information flow and its influence on emotions within a particular cultural milieu.

Information and Crisis Diffusion Sources

Research examining information diffusion abounds. Foundational research focused on the sources of information including the relative influence of different sources. Examples include the Lazarsfeld, Berelson, and Gaudet (1968) classic work of the 1940 presidential election in the United States. The surprised researchers learned that interpersonal influence, especially through opinion leaders, explained approximately one-half of voting behavior when compared with media sources. Steinfatt, Gantz, Seibold, and Miller (1973) indicated the importance of interpersonal sources for crisis news diffusion, indicating that interpersonal sources were surprisingly more explanatory than media sources. Data from their study illustrate:

<u>Event</u>	<u>Percent Hearing from Interpersonal Sources</u>
1. JFK assassination	
a. San Jose sample	50%
b. Iowa City sample	55%
c. Dallas sample	57%

2. George Wallace assassination attempt

70%

DeFluer and Ball-Rokeach (1976) highlighted the mitigating influence of interpersonal communication on media messages. One of their points is that interpersonal relationships mitigate what has been perceived as a monolithic influence of mass media. This mediating influence model of mass communication is an echo of the earlier studies by Katz (1955) who emphasized a two-step flow of information through opinion leaders, and the work of Klapper (1960) and later Gandy and Matabane (1989) who underscored a variety of variables mediating mass communication: interpersonal networks, demographics, motivation, personality, and cultural norms and values. In essence, their work confirmed the notion of intervening factors that account for a “third variable” in the theoretical link “between exposure and effect” of the mass media.

Patterson and McClure (1976) explained voting behavior in the 1972 presidential election with 16 percent of choices attributed to political advertising, 42 percent from news events (such as the Vietnam War), and the remaining 42 percent from interpersonal and other sources. Dodd’s (1979) research regarding news diffusion of the Swine Flu Inoculation Program from that period of U.S. history during the Gerald Ford presidency indicated that while newspaper sources created attention to the program, 83 percent of the respondents sought additional information from interpersonal sources.

Rogers (1995) indicated from his review of hundreds of diffusion studies that interpersonal sources are highly influential at the persuasion stage of the adoption process. While the interpersonal influence depends partly on the type of person considering adoption (innovators, early adopters, early majority, late majority, and laggards), the role of interpersonal influence appears to have an average influence of about 51 percent. These diffusion studies indicate how information travels along homophilous cultural and social networks, gathering strength as sources of awareness and influence for groups or individuals considering innovation adoption (Rogers, 1995). The socio-cultural nature of the information diffusion process is accented under Rogers’ notion of a social network’s interconnectedness ratio (frequency of regular communication within a network), an index that predicts social network influence (Rogers, 1995). Furthermore, Wiemann (1989) advanced the concept of network analysis to underscore various cultural communication roles, such as opinion leadership, links, liaisons, bridges, and dead-enders.

Researchers have identified complex, intervening issues in media news diffusion and influence in a number of settings, including organizational cultures. For example, Timmerman (2002) compared rich media (able to transmit multiple messages, degree of personal focus, use of natural language; voicemail is good example of a rich medium) with lean media (such as the world wide web, which does not provide immediate feedback, and does not explicitly indicate the

recipient of the message). The conclusions indicated that media selection, at least in organizational cultures, correlates with the nature of the task: simple tasks can use objective lean media, while complex tasks demand a rich medium. Collins-Jarvis (1997) argued that within collective action organizations, interpersonal interactions exert more influence on goal consensus than organizational mass media. The comparisons between interpersonal and media sources reveal some 49 percent effectiveness for interpersonal sources compared with only a 10 percent influence of media sources on a topic.

Furthermore, media usage studies, related to news diffusion research, typically seek to identify a wide range of approaches to mediated information. For example, Palmgreen and Rayburn (1985) identified the three phases of the uses and gratifications paradigm. The third phase marks an interest in need-based social and psychological origins, motivations, social contextual factors, and individual differences. In another stream of research, Sherry (2001) linked temperament analysis with media use. Still other paradigms and models range from cultivation theory to neurobiological predictors of media usage abound (Sherry, 2001; Timmerman, 2002).

Cultural Crisis Communication and Emotional Response

The September 11 attack served as a cultural crisis communication event, and as crisis information, launched communication discourse that clearly affected emotions. The renewed interest in communication and emotions has initiated several approaches to understanding the impact of messages and events on emotions. For example, Scudder (1999) and Fiske & Taylor (1991) argue for "appraisal theory" to explain emotional responses. Simply put, their theory argues how emotions occur after a cognitive or intuitive appraisal of an event or message. While scholars disagree over the nature of appraisals, two dimensions of emotions persist: valence and arousal (Scudder, 1999). According to the theory, a person perceives a message, situation, or event and appraises the situation for positivity/negativity, meaning, and congruence with cultural/social norms. In other words, communication events like September 11 are assessed in light of compatibility with social norms and cultural values. As Monahans (1995) signified, public expression (or a public tragedy in this case) leads to a state of internal feelings. She continued to point out that high cognitive load affects the ultimate affective evaluation of the communication message or event.

Diffusion messages, which are crisis-oriented communication, inspire discourse responses, including cognitive and affective dimensions of that discourse. For example, Seeger & Ulmer (2002) explain crisis-related information as a discourse often beginning the crisis communication with blame, harm, responsibility, and victimization. Next, post-crisis communication, in the rhetorical tradition of *apologia*, acts to defend actions in the interests of organizational goals. Last, the net result of crisis communication is the

possibility of potentially positive outcomes. They believe that out of the chaos of crisis a new stability arises. Thus, post-crisis communication about the crisis event offers an opportunity to reframe the events and process the crisis in a positive way. This analysis provides a framework for the September 11 crisis and its impact on emotions.

Rationale and Research Questions

The September 11, 2001 tragedy represents a case of cultural, crisis-oriented information and its impact on emotions. The narrative is clear with the events and subsequent rhetoric abundant on an international, national, and local level. This research asks two fundamental questions resulting from this cultural crisis event. (1) One question regards information sources. In this question, we seek to understand the nature of information diffusion within a culturally conscious event like September 11 and question how the information is discovered. (2) A second question inquires about the emotional persistence from this crisis event. Would individuals begin with communication ambiguity about their emotions or communication certainty? Would those emotions persist over time or change? What role would social-cultural norms and values play in the persistence issues?

The research questions for the study are based on the assumption that profiling information sources is an ongoing, cultural assessment process. When communication scholars explore the nature of information diffusion, the more complete their understanding of "information culture." That assumption can be made for ordinary information sharing (like operational information or rumors) as well as for extraordinary events, like crisis-messages. The relative strength of interpersonal versus mediated information sources remains a continuing significant question.

In light of earlier news-crises research, would interpersonal, presumably more immediacy-based sources, be more important than mediated? The answer should add a profile to communication knowledge of the nature of tragic news information in a nationally cultural condition like September 11.

Research Question 1: What are the information sources for this crisis communication?

In addition, communication studies recognize the cognitive and affective influence of information on persuasion. According to the literature sampled above, communication events become a cultural message, which also stimulates discourse over the event. Assessing emotional response recall immediately after the event and then one year later would open an understanding of emotional change over time regarding crisis events. Illuminating this understudied topic of affective shifts resulting from crisis inquires how culture influences which

emotions persist and which change. Thus, a second research question asks for a profile of emotional responses the day of the attack and one year later.

Research Question 2: What emotional shifts have occurred resulting from this cultural crisis communication?

Methods

Respondents

This study surveyed 76 respondents from a mid-sized university in the Southwestern United States, ages 17 to 20. Compliance in the study was voluntary and ample time was provided in a classroom setting in order to allow the sample to complete the survey. Gender was split at 37% males and 63% females. Of significance is that the data were collected September 12, 2002, obviously one year after the crisis event.

Survey Instrument

Sources of information. The instrument included sources of information upon first hearing the events of September 11, 2001. These sources analyzed for their frequency included: (1) TV, (2) radio, (3) random person, (4) teacher in a class, (5) friend, and (6) parent. The locations upon first hearing the crisis event included: (1) school, (2) home, (3) business or office, (4) office/work, (5) friend's house, (6) out of the country, (7) car radio.

Affective response to September 11. One question in the instrument used an open-ended technique for respondents to recall and write their emotions from the September 11 events. A second open-ended question asked respondents to report their current emotions about September 11 (which was one year later). The respondents were given ample time to complete these open-ended questions. The content analysis from these items across the respondents provided a categorization of twelve emotions. In order to analyze the statistical frequency of the emotions, each individual's response was coded as "yes" or "no" regarding the presence or absence of each emotion.

Method of Data Analysis

The data collected were coded as indicated above. The sources and location profile results were obtained by applying a frequency analysis, while differences were analyzed with a one-way Chi-square. The Wilcoxon Sign Test for related measures and the Sign Test for related measures analyzed the significant differences between emotions before and one year later. All statistics were performed with SPSS-pc.

Results

The study profiles information sources and assesses past and current emotional responses to the crisis message. In every case where significant

differences can be assessed, they are analyzed for their importance in determining groupings and heightening a profile understanding of the variables presented.

Source and Location of Information

Table 1 indicates the source of information of the event: Teacher (27.6%), TV (26.3%), radio (17.1%), friend (14.5%), parent (10.5%), and random person (3.9%). When the frequencies are grouped by medium, interpersonal sources accounted for 56.5%, while media sources represent 43.4%. This finding is similar to the classic studies from Steinfatt and others (1973) indicating that interpersonal sources play a dominant role.

Table 2 reveals the most frequently occurring information locations were school (57.9%), home (22.4%), car (7.9%), at a business (5.3%), at work (2.6%), out of the country (2.6%), and friend's house (1.3%). Obviously, the time of day of the news event clearly affected the location where most of these students first learned of the story.

When gender was compared for both information sources and location, neither indicated a significant difference (chi-square = ns). Nor did other demographic differences appear to be an intervening factor in the source or location analysis in this study.

Table 1
Crisis Information Sources of September 11, 2001

Teacher	27.6
TV	26.3%
Radio	17.1%
Friend	14.5%
Parent	10.5%
Random person	3.9%
<u>Summary:</u>	
Interpersonal Sources:	56.5%
Media Sources	43.4%

Chi-square=19.053, p= .002

Table 2
Location of Crisis Source

School	57.9%
Home	22.4%
Car	7.9%
At a business	5.3%
At work	2.6%
Out of the country	2.6%
Friend's house	1.3%

Chi-square = 134.55, $p = .0001$

The second research question asked for a content analysis of emotional responses on September 11, 2001 and then asked respondents to record emotional responses one year later. The responses were recorded September 12, 2002. The content analysis revealed 12 emotions. The comparisons over the one-year intervening time are presented in table 3 on the next page. The data indicate that empathy, pride, hope, sorrow, and safety increased from 10 to 26 percentage points over the year. However, fear, shock, confusion, uncertainty, and anger decreased from over 44 to 18 percentage points over the year. The emotions of horror and revenge changed in a downward direction only slightly (the Wilcoxon Sign Test for related samples revealed significant changes, but the Sign Test for related samples did not indicate significant change).

Discussion

Source of Information

Regarding the first research question of sources of information, the profile and test of difference revealed the importance of interpersonal communication sources over media sources (56.5% vs. 43.4%, $p = .002$). Obviously, being in school for most of the students (57.9%) was a factor contributing to the nature of the sources of information, although home and places of work and other locations weighed in for many students.

The interpersonal relationships in the respondents' communication environment (teachers, parents, friends) could be argued as interpersonal-immediacy relationships, accounting for 52.6% (excluding the 3.9% random

person category) and media as zero- immediacy relationships, accounting for 43.4%. These findings appear to support the continuance of the theory pur-

Table 3
Emotional Response Shift

<u>Affective Response</u> (Positive change)	<u>9-11-01</u>	<u>9-12-02</u>	<u>Difference</u>	<u>Significance*</u>
Empathy	3.9%	30.3%	+26.4	.000
Proud	2.6%	26.3%	+23.7	.000
Hope	2.6%	25.0%	+22.4	.000
Sorrow	43.4%	63.2%	+19.8	.011
Feel Safe	1.3%	11.8%	+10.5	.012
(Negative change)				
Fear	50.0%	5.3%	-44.7	.000
Shock	59.2%	16.4%	-42.8	.000
Confusion	36.8%	1.3%	-35.5	.000
Uncertainty	32.9%	6.6%	-26.3	.000
Anger	34.2%	15.8%	-18.4	.002
Horror	17.1%	7.9%	-9.2	.052**
Revenge	10.5%	2.6%	-7.9	.034**

*Significance using Wilcoxon Sign Test for related samples. **These two variables under the Sign Test for related samples were not significant (.092 and .070 respectively).

porting to elevate interpersonal sources during crisis. On one hand, immediacy theory explains a genuine and lasting source of information for these respondents. When it comes to crisis information, diffusion bad news travels quickly through relationships. Is the result of more interpersonal than media an artifact of the time of day (morning, school) as compared with a weekday evening or weekend day or night? If this were summertime, would people call each other and talk between friends, or parents to children, or would media provide a stronger source of new diffusion? We cannot know from this study.

However, if the theory of the importance of interpersonal communication sources for crisis information diffusion were to endure, we must entertain reasons other than convenience. The classic research reviewed earlier in this paper indicates the relevance of interpersonal sources. For instance, the Steinfatt, et al. study indicates a range from 50-70% interpersonal sources of information. Clearly, opinion leadership, media agenda setting, media as sources of

awareness studies, and other factors contribute to a complex picture of interpersonal-media mixes of news diffusion.

In any case, however, crisis-oriented, disquieting news passes quickly between people. Moreover, people have a need to tell and to hear bad news from interpersonal sources. When a friend, parent, or teacher explains crisis events, these interpersonal, primary conveyors of crisis provide a cultural opportunity for interpretation not just information. Described in theory terms, the motivation to discuss cultural crisis from culturally similar interactants and the immediacy context afforded by similarity and homophily with those we know and trust, persists as a model that appears to explain much of this crisis behavior.

Emotional Response to Crisis Information and Change

A second question in this study explored the presence of various emotions following the crisis information. Related to the immediate impact of information on affective responses is the longer question of how these emotions might undergo change over the year's intervention since the September 11 attack. Would their emotions shift? How would they change? Can this time perspective convey insight into the crisis communication process about the persistence or change of emotions attached to crisis information?

As indicated in the results section, data indicate that empathy, pride, hope, sorrow, and safety increased in a range from 10 to 26 percentage points over the year. However, fear, shock, confusion, uncertainty, and anger decreased from over 44 to 18 percentage points over the year, while the emotions of horror and revenge changed minimally. One explanation for this finding comes from an internal perspective to the emotions themselves. That is, the set of emotions that increased can be qualified as "positive emotions" in U.S.-culture. A U.S.-cultural perspective argues that empathic responses, healthy pride, and feeling safe are "value correct" emotions to experience. By contrast, fear and shock, confusion and uncertainty, horror, and revenge are considered "inappropriate emotions" to harbor over time. Thus, it appears culture distills positive from negative emotions over time.

This finding is supported by the social/cultural norms theory suggested by Scudder (1999) and organized in Seeger & Ulmer's (2002) analysis. In this case, respondents reframed the valence and intensity of emotions to align their emotions in culturally acceptable ways. To use Seeger & Ulmer's (2002) idea, the post-crisis discourse presumably allowed a framing of crisis events to become a positive organizing process. In other words, it is not culturally appropriate to nurture negative feelings like fear, confusion, or revenge. It is highly appropriate, however, to elevate emotions like empathy, hope, and pride.

Some limits to this study are noted. While interpersonal sources persistently play a large role in conveying bad news, we should not discount mediated sources of news diffusion. Crisis event diffusion needs to examine the relative importance of timing related to mediated and interpersonal information sources.

Furthermore, the complex linkage between the interpersonal and media message mix throughout a day of crisis events like September 11 demands a deeper, richer analysis. In addition, cross-cultural and intercultural comparisons in future research would offer additional insights into cultural crisis. Methodology asking for recall data can be risky. In this case, the risk was worth the limitation, since the tragedy's significance lingers to encourage clear memories, especially after the many ceremonies marking the important event one year later.

Studies of this type are opportunistic, and sadly, do not allow the control over the other variables needed in such a study. Future research might include variable times of the year, controlled release of messages in organizations compared simultaneously as information diffusion, intercultural comparisons, and other baseline measures. In addition, future studies would be more effective by analyzing a snowball sample, which follows a trail of interpersonal diffusion. Information networking techniques applied to crisis information diffusion would allow scholars to understand unique variables contributing to social information processing. Other suggestions include information motivation, personality, and post-crisis analysis of media and interpersonal sources to sort out the feelings days or weeks later, not just to discover sources of initial knowledge of the crisis.

Conclusions

The study stands uniquely in analyzing a national crisis and concluding with a cultural perspective. Few if any studies on crisis diffusion encourage examining cultural norms and values as factors contributing to results. Second, few studies are able to compare emotional responses from time one to time two, which this study allowed in light of the significance of the crisis and the ability to remember emotional conditions.

From a cultural theory perspective, this research highlights two important theories about communication in a cultural crisis. First, this research supports the importance of interpersonal sources regarding crisis information. This finding supports theory based on cultural similarity and homophily, as previous research by Rogers indicates. The importance of personal, immediacy needs in the midst of crisis information also may account for the consistent pattern of influence from interpersonal sources of news diffusion across the many years of research in this area.

Second, this work argues that culture shapes which emotions persist over time, as Scudder suggested. This study uniquely identified how individuals cling to culturally appropriate positive emotions (like empathy-sorrow, hope, or safety for oneself). By contrast, U.S.-culture frowns upon nurturing negative emotions like fear, shock, confusion, uncertainty, anger, horror, or revenge. It appears that cultural and social norms influence post-crisis communication in ways to reduce the anxiety of such an attack and consequently to organize and reframe a positive set of feelings.

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A Word On Brooks Hill as My Professor
Carley H. Dodd

Few people take the time or invest in their students as much as Brooks Hill. From day one as one of my graduate professors, Dr. Hill supported, encouraged, challenged, and made me look beyond myself and even the discipline. He fought to convey to his students the value of multiple-disciplinary views that offer perspective of related concepts. He helped us imagine theories that best explained results. He took personal time to mentor and encourage me personally, as he did for other students as well.

The results of his teaching and mentoring are best seen in dozens if not hundreds of highly productive learner-teachers-scholars that follow today in Brook's footsteps. Even now, they teach their students the lessons of loyalty, mentoring, and hard work to be successful in the field.

Thank you Brooks.

Carley H. Dodd, Ph.D.
University of Oklahoma, 1974

